

Potential Problems with Sample Shipment and Analysis

- **Incorrect or Incomplete Paperwork**
- **Laboratory Receipt of Incorrect Samples**
- **Insufficient Volume for Analysis Requested**
- **Broken or Leaking Samples**
- **Matrices other than Water or Soil (i.e., Rocks, Leaves, Sticks, Oil, Etc.)**
- **Non-Homogeneous/Multi-Phase Water or Soil Samples**
- **Analytical Problems with Samples**
- **Laboratory Accidents Involving Samples**

***If Any of These Problems Are Encountered,
Contact SMO Immediately***



RAS Summary

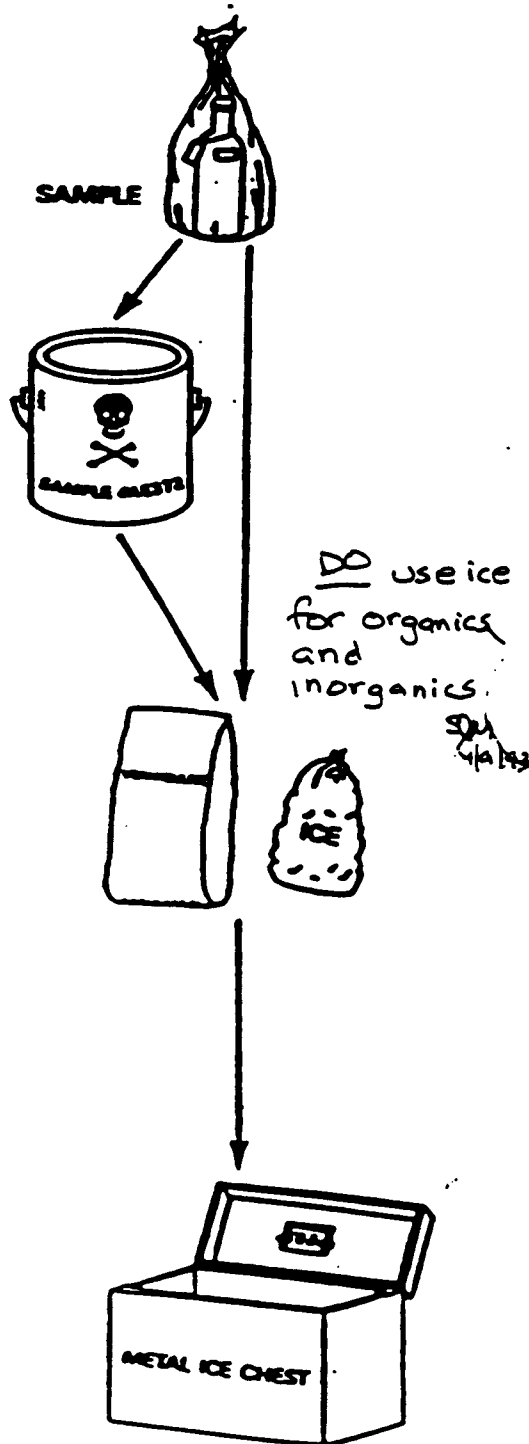
- **Standardized Analyses for Organics and Inorganics**
- **Low/Medium Concentration Waters and Soils**
- **High Concentration Multi-Phase Samples**
- **One Week Leadtime**
- **Projects Designated by a Case Number,
Example: Case No. 17000**



9418094



SAMPLE PACKAGING SUMMARY



- ENCLOSE ALL SAMPLE CONTAINERS IN CLEAR PLASTIC BAGS.
- PACK ALL MEDIUM AND HIGH LEVEL WATER AND SOIL SAMPLES IN METAL PAINT CANS.
- LABEL PAINT CANS WITH SAMPLE NUMBER OF SAMPLE CONTAINED INSIDE.
- SURROUND CONTENTS OF CAN WITH NON-COMBUSTIBLE, ABSORBENT PACKING MATERIAL.
- USING FREEZER PACKAGES OR ICE SEALED IN PLASTIC BAGS, COOL ORGANIC LOW OR MEDIUM SAMPLES AND INORGANIC SAMPLES TO BE ANALYZED FOR CYANIDE TO 4°C.
- ICE IS NOT REQUIRED IN SHIPPING LOW LEVEL SOIL SAMPLES, BUT MAY BE UTILIZED AT THE DISCRETION OF THE SAMPLER.
- DO NOT COOL DIOXIN, INORGANIC LOW LEVEL WATER, INORGANIC MEDIUM/HIGH LEVEL WATER OR SOIL, OR ORGANIC HIGH LEVEL WATER OR SOIL SAMPLES.
- PACK SEALED PAINT CANS OR PLASTIC-ENCLOSED SAMPLE BOTTLES IN SHIPMENT CONTAINER.
- USE A METAL ICE CHEST FOR SHIPMENT (DO NOT USE CARDBOARD OR STYROFOAM CONTAINERS TO SHIP SAMPLES).
- SURROUND CONTENTS WITH NON-COMBUSTIBLE, ABSORBENT PACKING MATERIAL (DO NOT USE EARTH OR ICE PACKING MATERIALS).
- TAPE PAPERWORK IN PLASTIC BAGS UNDER COOLER LID.
- CLOSE COOLER AND SEAL WITH CUSTODY SEALS.

& Chain of Custody Record (For Organic CLP Analysis)

N/A &

17892

Project Code 6-85231		Account Code SF-05		2. Region No. VI		Sampling Co. VIAR + CO.		4. Date Shipped 11/13/91		Carrier FEDERAL EXPRESS		6. Preservative (Enter in Column D)		7. Sample Description (Enter in Column A)	
Regional Information —				Sampler (Name) KEVIN K. CONNELL				Airbill Number 3758921237				1. HCl 2. HNO ₃ 3. NaHSO ₄ 4. H ₂ SO ₄ 5. Other (SAS) (Specify) 6. Ice only N. Not preserved		1. Surface Water 2. Ground Water 3. Leachate 4. Rinse 5. Sol/Sediment 6. OH (SAS) 7. Waste (SAS) 8. Other (SAS) (Specify)	
Non-Superfund Program —				Sampler Signature <i>K.K. Connell</i>				5. Ship To MATEX / GULF SOUTH ENVIRON. LAB 6801 PRESS DR., EAST BLDG. NEW ORLEANS, LA 70126 ATTN: KAREN BRANDT							
Site Name DIOXINS 'A' US				3. Type of Activity											
City, State DALLAS, TX		Site Split ID 77		SF <input type="checkbox"/> PRP <input type="checkbox"/> ST <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> PA <input type="checkbox"/> SS <input type="checkbox"/> OSM <input type="checkbox"/> NPLD <input type="checkbox"/> RIFS <input type="checkbox"/> RD <input type="checkbox"/> RA <input type="checkbox"/> O&M <input type="checkbox"/> NPLD <input type="checkbox"/> <input checked="" type="checkbox"/> CLEM <input type="checkbox"/> REMA <input type="checkbox"/> REM <input type="checkbox"/> OIL <input type="checkbox"/> UST <input type="checkbox"/>											
CLP Sample Numbers (from labels)		A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis				F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Designated Field OC
						VOA	BNA	Pest/PCB	High ARO/TOX						
FL 140		S	L	G	N			X		6-14778	SS-01	11/13/91, 9:15	KC	MFL 140	} see trip log
FL 141		S	L	G	N			X		6-14739	SS-02	11/13/91, 9:30	KC	MFL 141	
FL 142		1	L	G	N			X		6-14740	SW-01	11/13/91, 11:00	KC	MFL 142	
FL 142		1	L	G	N			X		6-14791	SW-01	11/13/91, 11:00	KC	MFL 142	
FL 142		1	L	G	N			X		6-14742	SW-01	11/13/91, 11:00	KC	MFL 142	
FL 143		2	L	G	N			X		6-14743	GW-01	11/13/91, 11:45	KC	MFL 143	
FL 144		1	L	G	N	X				6-14744			KC	—	TRIP BLANK
Shipment for Case complete? (Y/N)		Page 1 of 1		Sample used for a spike and/or duplicate FL 140; FL 142				Additional Sampler Signatures <i>[Signature]</i>				Chain of Custody Seal Number 789462			

CHAIN OF CUSTODY RECORD

CHAIN OF CUSTODY RECORD					
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
K.K. O'Neill	11/13/11 4:20				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

Split Samples ☐ Accepted (Signature)
☐ Declined

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"This form replaces both the individual Traffic Report and EPA Chain of Custody Record. If the sampling team elects to use an alternative chain-of-custody form, cross out the bottom portion of this record and indicate that chain-of-custody information is recorded on an alternative form."

Water Samples	Required Volume	Container Type
Extractable Analysis (Low Level)	1 Gallon	1 X 4-Liter Amber Glass Bottle
		OR
		2 X 80-oz. Amber Glass Bottle
		OR
		4 X 1-Liter Amber Glass Bottles
Extractable Analysis (Medium Level*)	1 Gallon	32-oz. Wide-Mouth Glass Jars
Volatile Analysis (Low or Medium Level*)	80 ml	2 X 40-ml. Glass Vials



*All Medium and High Level Samples to be Sealed in Metal Can for Shipment

Soil/Sediment Samples	Required Volume	Container Type
Extractable Analysis (Low or Medium Level*)	6 oz.	1 X 8-oz. Wide-Mouth Glass Jar
	240 ml.	2 X 4-oz. Wide-Mouth Glass Jars
Volatile Analysis (Low or Medium Level*)		2 X 120-ml. Wide-Mouth Glass Jars

*Soil VOA Vials under study, subject to change. Check to ensure proper sealing

HIGH CONCENTRATION SAMPLE COLLECTION REQUIREMENTS

Liquid or Solid Samples	Required Volume	Container Type
Extractable and Volatile Analysis	6 oz.	1 X 8-oz. Wide-Mouth Glass Jar

1. Organic Sample Collection Requirements

- Please indicate sample to spike and/or duplicate.
- Ship medium and high concentration samples in paint cans.
- Aqueous samples require one triple-volume sample per twenty for Matrix Spike/Matrix Spike Duplicate.
- Oily samples must be analyzed under the Special Analytical Services (SAS) program.
- Confirmatory analysis and Special Analytical Services (SAS) parameters may require extra volume: for SAS consult specified SAS methods for requirements.
- Additional sample volume not required for method OLC01.

2. Cooler and Sample Documentation

- Complete all sections of the Traffic Report/Chain of Custody Form - Press firmly with a ball point pen to ensure that carbon copies are legible. Check the information and correct any errors.
- Please remember to complete the Chain of Custody information on the form.
- Seal the two sets of laboratory Traffic Report/Chain of Custody form copies in a plastic bag. Include a return address for the cooler. Tape bag under cooler lid.
- Overlap the lid and bottle and bottle of each sample container with custody seals.
- Seal each container in a plastic bag.
- Pack medium and high concentration samples in metal cans.
- Cool low waters to 4° C. Cooling of low soils is optional. Do not cool medium or high concentration waters and soils.
- Separate and surround cooler contents with vermiculite or equivalent packaging.
- Seal the cooler, overlapping the lid and body with custody seals.
- FAX SMO a copy of the Traffic Report/Chain of Custody Form as soon as possible. Send SMO the pink copy of the Traffic Report within 5 days.
- In column E RAS analysis indicate number of sample bottles sent for analysis.

3. Sample Shipment Reporting

- PHONE IN ALL SHIPMENTS IMMEDIATELY TO SMO (or to RSCC, if instructed)

Required information:

Case (and/or SAS) Number

Date shipped

Number of samples by concentration and matrix

Carrier and airbill number

Next planned shipment

Leave your name and a number where you can be reached.

- Information for SATURDAY DELIVERIES must be phoned in by 3:00 PM (Eastern) the preceding FRIDAY.
- Report any delays or changes of scope (i.e., changes in number of samples to be collected, matrix changes, etc.)
- CALL IF YOU HAVE ANY QUESTIONS

USEPA Contract Laboratory Program

Sample Management Office

P.O. Box 818

Alexandria, VA 22313

Phone: (703) 557-2490

(703) 684-5678

FAX: (703) 683-0378



PO Box 8 Alexandria, VA 22304
703 557 2490 1 TS 557 2490

Chairman, Council on
(For Inorganic CLP Analysis)

1 Sample Description (Enter in Column A) 1 Surface Water 2 Ground Water 3 Leachate 4 Rinsate 5 Soil/Sediment 6 Oil (SAS) 7 Waste (SAS) 8 Other (SAS) (Specify)		2 Preservative (Enter in Column D) 1 HCl 2 HNO ₃ 3 NaOH 4 H ₂ SO ₄ 5 K ₂ Cr ₂ O ₇ 6 Ice only 7 Other (SAS) (Specify) N Not preserved		3 Region No Sampling Co Sampler (Name) Sampler Signature 4 Type of Activity Lead: SF, PRP, ST, FED Pre Remedial: PA, SSI, LSI Remedial: RIFS, RD, RA, O&M, NPLD Removal: CLEM, REMA, REM, OIL, UST		5 Date Shipped Carrier Airbill Number 6. Ship To 7. Date Received -- Received by Laboratory Contract Number Unit Price 8. Transfer to Date Received Received by Contract Number Price								
CIP Sample Numbers (from labels)	A Enter # from Box 1	B Conc Low Med High	C Sample Type Comp / Grab	D Preservative from Box 6	E - RAS Analysis Metals: Total, Dissolved, Cyanide Low Conc: Nitrate, Nitrite, Fluoride High Conc: pH, Conductivity		F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No	K Sample Condition on Receipt	L High Conc. Phases (Check below) Solids, Water - MS Lq, Non Water - MS Lq	
Shipment for Case complete? (Y/N)		Page 1 of		Sample used for a spike and/or duplicate		Additional Sampler Signatures		Chain of Custody Seal Number						

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6) previous edition which may be used

DISTRIBUTION

Green - Remon, Pink - SMO Copy, White - Lab Copy, Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)

☐ Declined

EXHIBIT C

TARGET COMPOUND LIST (TCL) AND
CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)

LOW/MEDIUM CONC.
RAS ORGANIC

NOTE: The values in these tables are quantitation limits, not absolute detection limits. The amount of material necessary to produce a detector response that can be identified and reliably quantified is greater than that needed to simply be detected above the background noise. The quantitation limits in these tables are set at the concentrations in the sample equivalent to the concentration of the lowest calibration standard analyzed for each analyte.

Specific quantitation limits are highly matrix dependent. The quantitation limits listed herein are provided for guidance and may not always be achievable.

The CRQL values listed on the following pages are based on the analysis of samples according the specifications given in Exhibit D. For each fraction and matrix, a brief synopsis of the sampling handling and analysis steps is given, along with an example calculation for the CRQL value. All CRQL values are rounded to two significant figures. For soil samples, the moisture content of the samples is not considered in these example calculations.

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)

Pesticides/Aroclors	CAS Number	Quantitation Limits*		
		Water ug/L	Soil ug/Kg	On Column (pg)
98. alpha-BHC	319-84-6	0.05	1.7	5
99. beta-BHC	319-85-7	0.05	1.7	5
100. delta-BHC	319-86-8	0.05	1.7	5
101. gamma-BHC (Lindane)	58-89-9	0.05	1.7	5
102. Heptachlor	76-44-8	0.05	1.7	5
103. Aldrin	309-00-2	0.05	1.7	5
104. Heptachlor epoxide	1024-57-3	0.05	1.7	5
105. Endosulfan I	959-98-8	0.05	1.7	5
106. Dieldrin	60-57-1	0.10	3.3	10
107. 4,4'-DDE	72-55-9	0.10	3.3	10
108. Endrin	72-20-8	0.10	3.3	10
109. Endosulfan II	33213-65-9	0.10	3.3	10
110. 4,4'-DDD	72-54-8	0.10	3.3	10
111. Endosulfan sulfate	1031-07-8	0.10	3.3	10
112. 4,4'-DDT	50-29-3	0.10	3.3	10
113. Methoxychlor	72-43-5	0.50	17.0	50
114. Endrin ketone	53494-70-5	0.10	3.3	10
115. Endrin aldehyde	7421-36-3	0.10	3.3	10
116. alpha-Chlordane	5103-71-9	0.05	1.7	5
117. gamma-Chlordane	5103-74-2	0.05	1.7	5
118. Toxaphene	8001-35-2	5.0	170.0	500
119. Aroclor-1016	12674-11-2	1.0	33.0	100
120. Aroclor-1221	11104-28-2	1.0	33.0	100
121. Aroclor-1232	11141-16-5	2.0	67.0	200
122. Aroclor-1242	53469-21-9	1.0	33.0	100
123. Aroclor-1248	12672-29-6	1.0	33.0	100
124. Aroclor-1254	11097-69-1	1.0	33.0	100
125. Aroclor-1260	11096-82-5	1.0	33.0	100

* Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

There is no differentiation between the preparation of low and medium soil samples in this method for the analysis of Pesticides/Aroclors.

APPENDIX E

SITE RECONNAISSANCE CHECKLIST

I. SITE INSPECTION INFORMATION

- ## II. GENERAL SITE INFORMATION

- B. ____ Verify site location on a topo map, indicating the reason for any discrepancies below:**

**SITE RECONNAISSANCE ~~ONE~~ LIST
SITE FEATURES WORKSHEET**

III. SITE FEATURES

1. ☐ Draw a sketch map of the site to show the location of important site features
2. ☐ Describe site access features:
 - a. Locations where the site can be accessed: _____
 - b. Major roads leading to site: _____
 - c. On-site roads / paths and their condition: _____
 - d. Location/condition of barricades impeding site access: _____
3. ☐ List current/historic site occupants and landuse:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
4. ☐ Indicate the nature of the site occupant(s) (put corresponding letter from above beside type below)

a. <input type="checkbox"/> Lumber or wood products	l. <input type="checkbox"/> Retail
b. <input type="checkbox"/> Inorganic chemicals	m. <input type="checkbox"/> Recycling
c. <input type="checkbox"/> Plastics or rubber products	n. <input type="checkbox"/> Junk/salvage yard
d. <input type="checkbox"/> Paints or varnishes	o. <input type="checkbox"/> Municipal landfill
e. <input type="checkbox"/> Industrial organic chemicals	p. <input type="checkbox"/> DOD
f. <input type="checkbox"/> Agricultural chemicals	q. <input type="checkbox"/> DOE
g. <input type="checkbox"/> Misc. chemical products	r. <input type="checkbox"/> DOI
h. <input type="checkbox"/> Fabricated structural metal products	s. <input type="checkbox"/> Other federal facility: _____
i. <input type="checkbox"/> Electronic equipment	t. <input type="checkbox"/> RCRA TSD site: _____
j. <input type="checkbox"/> Other manufacturing: _____	u. <input type="checkbox"/> RCRA generator: _____
k. <input type="checkbox"/> Mining and other exploration: _____	v. <input type="checkbox"/> Other RCRA: _____
	x. <input type="checkbox"/> Other: _____
5. ☐ Status: a. ☐ Active b. ☐ Inactive or left site
6. ☐ Describe buildings or other structures (occupant, size, location, use)
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
7. ☐ Locate and describe the following:
 - a. ☐ Municipal water supply hook ups, if any
 - b. ☐ Storm drain Inlets or discharge points
 - c. ☐ Sanitary sewers
 - d. ☐ Parking lots and other impervious surfaces
 - e. ☐ Water wells
 - f. ☐ Oil and gas wells:
 - g. ☐ Mining activities onsite:
 - h. ☐ Rail spur locations (usage):
 - i. ☐ Pipelines (owner/contents):
 - j. ☐ Other easements:

**SITE RECONNAISSANCE CHECKLIST
SITE FEATURES WORKSHEET (CONTINUED)**

IV. NATURAL SITE FEATURES

1. ☐ Describe regional and site topography _____
2. ☐ Determine the site surface gradient / slope _____
3. ☐ Describe site and adjacent property vegetation _____
4. ☐ Describe site surface soils (texture, color, structure) _____

5. ☐ Describe site and local surface geological features (lithology, structures, grain size) _____

6. ☐ Locate and map nearby surface water bodies surface:
 - a. Determine the dimensions and profile of each surface water body _____

 - b. Describe flow rate and direction of flow, if any _____

 - c. Indicate the type surface water usage (fisheries, water intakes) _____

7. ☐ Locate and map any springs, seeps, ponded areas or wetlands _____
8. ☐ Locate and map any drainage swales or ditches onsite _____
9. ☐ Determine the direction and destination of site runoff _____
10. ☐ List other potentially sensitive environments
 - a. _____
 - b. _____
 - c. _____

V. OTHER NOTABLE SITE FEATURES

1. ☐ Describe any other notable site features below:

SITE RECONNAISSANCE CHECKLIST
SITE OPERATIONAL HISTORY CHECKLIST

VI. SITE OPERATIONAL HISTORY

1. ____ Describe the exact types and quantities of wastes stored and generated (what/when):
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____
2. ____ Determine the locations of historic waste disposal practices onsite (check as source area below _____)
3. ____ Map and describe historic buildings, storage areas or process areas no longer obvious onsite: _____
4. ____ Determine the current/historical number of occupants or workers onsite daily _____
5. ____ Describe in detail the current/historical processes used onsite: _____
6. ____ List site environmental related permits (RCRA, TACB, TWC, TRRC, TDH, etc.)
 - a. _____
 - b. _____
 - c. _____
 - d. _____
7. ____ Get copies of any manifests or other records available _____
8. Describe other relevant facts concerning site operations: _____

POTENTIAL WASTE SOURCES IDENTIFICATION WORKSHEET

A. Check the potential waste sources below which are found onsite:

1. ☐ Dry wells or injection wells
2. ☐ Ponds, lagoons or other surface impoundment
3. ☐ Landfills
4. ☐ Land treatment or land farming areas
5. ☐ Areas of contaminated soil
6. ☐ Storage tanks or other nondrum containers
7. ☐ Drums or drum-like containers
8. ☐ Incineration areas or burn pits
9. ☐ Piles (Chemical, scrap metals, tailings, etc.)
10. ☐ Ventilation systems
11. ☐ Hydraulic lifts
12. ☐ Pits or sumps
13. ☐ Transformers
14. ☐ Contaminated sediments or surface water with unidentified source
15. ☐ Contaminated groundwater with unidentified source
16. ☐ Other source type (describe: _____)
17. ☐ No sources identified

SITE RECONNAISSANCE CHECK LIST WASTE SOURCE DESCRIPTION WORKSHEET

(Complete one sheet for each source area)

1. ☐ Assign waste source a name for identification: _____
2. ☐ Status of source area (closed, inactive, active) _____
3. ☐ Locate the source area on a map and describe location: _____
4. ☐ Measure the dimensions of the source area: _____
5. ☐ Determine the length of time that the source area contained waste: _____
6. ☐ Describe the method of source containment and degree of maintenance: _____
7. ☐ Describe the method of secondary containment and maintenance: _____
8. ☐ Indicate the current and historical contents of source area:

a. <input type="checkbox"/> Metals	i. <input type="checkbox"/> Paints/pigments/dyes
b. <input type="checkbox"/> Inorganics	j. <input type="checkbox"/> Solvents
c. <input type="checkbox"/> Organics	k. <input type="checkbox"/> Laboratory/hospital waste
d. <input type="checkbox"/> Radioactive waste	l. <input type="checkbox"/> Construction/demolition waste
e. <input type="checkbox"/> Pesticides/herbicides	m. <input type="checkbox"/> Acids/bases
f. <input type="checkbox"/> Oily waste	n. <input type="checkbox"/> Municipal/residential type waste
g. <input type="checkbox"/> Mining waste	l. <input type="checkbox"/> Other (describe) _____
h. <input type="checkbox"/> Explosives	
9. ☐ Describe the physical state of the waste (check one)

a. <input type="checkbox"/> Solid	b. <input type="checkbox"/> Powder
c. <input type="checkbox"/> Liquid	d. <input type="checkbox"/> Sludge
e. <input type="checkbox"/> Gas	
10. ☐ Determine the location of waste generation:

a. <input type="checkbox"/> onsite	b. <input type="checkbox"/> offsite (generator): _____
------------------------------------	--
11. ☐ Indicate who authorized waste deposition:

a. <input type="checkbox"/> Present owner	c. <input type="checkbox"/> Unauthorized
b. <input type="checkbox"/> Former owner	d. <input type="checkbox"/> Unknown
12. ☐ Assess the accessibility of the source area to the public:

a. <input type="checkbox"/> Accessable	b. <input type="checkbox"/> Nonaccessable (why): _____
--	--
13. ☐ Current and historical high level of containment _____
14. ☐ Method of secondary containment and degree of maintenance _____
15. ☐ Indicate if there is visual evidence of a release

a. <input type="checkbox"/> Discharges or waste streams (Indicate receiving body): _____	
b. <input type="checkbox"/> Leachate outbreak	
c. <input type="checkbox"/> Spill or leak	
d. <input type="checkbox"/> Other type of release (describe): _____	
16. ☐ Indicate if there is visual evidence of contamination around source

a. <input type="checkbox"/> Stained/contaminated soil (area): _____	
b. <input type="checkbox"/> No evidence of	
17. ☐ Describe cover over the source area

a. <input type="checkbox"/> Engineered cap	
b. <input type="checkbox"/> Buried (w/soil, asphalt, etc.)	
c. <input type="checkbox"/> Other (Roof, tarp, etc.)	
18. ☐ Functioning collection or venting system (describe in detail) _____
19. ☐ Evidence of biogas release (odors, vapors, FID response) _____
20. ☐ Describe Vegetation around source area:

a. Type and degree of vegetation: _____	
b. Condition of vegetation (stressed/unaffected): _____	

VIII. OFFSITE SURVEY

1. ____ Describe and locate the map adjacent and nearby sites of interest:

- a. _____
- b. _____
- c. _____

2. ____ Map location of public facilities (schools, day care facilities, parks, etc.)

- a. _____
- b. _____
- c. _____

3. ____ Determine the location and number of residences within a 1/2 mile radius of the site

4. ____ Determine the population of workers, schoolchildren, etc in areas near the site

5. ____ List alternative source sites within a four mile radius:

a. Automobile service stations

- 1. _____
- 2. _____

b. Dry cleaners

- 1. _____
- 2. _____

c. Manufacturing/industrial sites

- 1. _____
- 2. _____

d. Rail loading areas

- 1. _____

e. Landfills

- 1. _____

f. Other sites

- 1. _____

6. ____ Locate and describe surface water bodies as follows:

- a. Distance to probable point of entry of a waste from the site
- b. Flow rate and direction of flow
- c. Storm drains discharging into the surface water body
- d. Potential targets along the surface water
- e. Branching in surface water flow path and effect on target
- f. Tidal influence effect on flow
- g. Tributaries with alternative source sites
- h. Drinking water intakes
- i. Fishing or other recreational use recreation

7. ____ Locate and describe water wells in the distance limit, as possible:

- a. Location of well and distance from site
- b. Well owner and population potentially served
- c. Well usage and completion information

